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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,012	01/31/2001	John F. McEntee	10004029-1	7500

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AGILENT TECHNOLOGIES
Legal Department, 51U-PD
Intellectual Property Administration
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EXAMINER

HANDY, DWAYNE K

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 12/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/775,012

Applicant(s)
McEntee

Examiner
Dwayne K. Handy

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1743



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 23, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 31, 2001 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the gap described in claim 10, lines 9-13 and claim 18, lines 9-13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the independent claim 10, applicant has recited the following limitation: "a gap along an inner surface of a top wall of the reaction chamber, the first well, the gap between the lower surface of the reactive entity and the inner, bottom surface of the reaction chamber, and the gap along the inner surface of the top wall of the reaction the deep well, and the gap along the

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inner surface of the top wall of the reaction chamber forming a continuous, enclosed volume around the reactive entity through which solution circulates as the reaction chamber is rotated about the rotation axis.” This phrase is unclear to the Examiner. As best the Examiner can determine from the disclosure and figures, the “top wall” of the device is provided by either the cover sheet or by the lower surface of the chip. The Examiner does not see an embodiment described in which there is a gap between the top surface of the chip and the reaction chamber, nor does he see a gap between the cover sheet and the upper surface of the chip. Also, it is unclear as to whether or not there are several gaps cited or one continuous gap that runs along several surfaces of the device. Finally, the Examiner fails to see how a gap can provide an “enclosed volume around the reactive entity”. It would seem that a gap would provide the open volume in conjunction with other features of the device. That is, a gap is an empty space. Since a gap is an empty space, the Examiner fails to see how it could form an enclosed volume. If applicant believes the Examiner has erred in reading these limitations, the Examiner would welcome an explanation which would clarify these structural relationship. The claims as they are currently written are rejected however.

In claims 11 and 13, applicant has defined the location of wells based on the location of an unclaimed element - a rotation axis. Since the axis is not part of the device, it cannot provide a structural reference for other elements of the device. Therefore, these claims are rejected as unclear as well.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-9 rejected under 35 U.S.C. 102(b) as being anticipated by Besemer et al. (5,945,334). Besemer et al. teaches an apparatus for packaging a chip. The basic embodiment of the device contains a cavity for mounting a chip and containing solution between the chip and a bottom surface of the device. The device is best shown in Figures 4-7 and described starting in column 6. From column 6, line 34: "Package (300) contains a cavity (310) on which a chip is mounted. The package includes inlets/outlets (350, 360) which communicate with cavity (310). Fluids are circulated through the cavity via the inlets/outlets (350 and 360). Figure 6 shows a side view of on embodiment without the cover piece (420). It shows the chip resting in the It is the position of the Examiner that the features he has cited meet the limitations of claim 1. The inlet and outlet elements (350, 360) correspond to a "first and second collection region". The space (310) between the chip bottom and the holder (410) corresponds to the solution chamber. Finally, the unlabeled bottom surface of the solution chamber would provide a solution return surface across which solution flows. The cover element shown in Figures 4 and 5 meets

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the limitation of a "cover strip". Besemer teaches a wide variety of substrates which may be placed into their holder in column 4 and includes microarrays.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Besemer et al. (5,945,334). Besemer teaches every element of claim 3 except for an inclined ramp as the

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surface that connects the two collection regions. It would have been obvious to one of ordinary skill in the art, however, that the surface could be at any level as long as the solution can pass across the surface between the two regions. Besemer's device provides a surface that allows the solution to travel between the two regions. The Examiner see nothing in the shape or incline of the surface as claimed that distinguishes this element over the flat surface of Besemer.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Besemer et al. (6,140,044) also teaches a method and apparatus for packing an array. Morozov et al. (6,350,609) disclose a device for electrospraying chips that includes a chip holding element. Love (4,911,816) and Lander (5,116,483) show devices for holding gel substrates. Messenger et al. (5,162,237) recite a reaction cassette that rotates about an axis in order to distribute fluids in the device. Kok (5,914,273) displays a tray for holding blotting materials.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (703)-305-0211. The examiner can normally be reached on Monday-Friday from 8:00 to 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on (703)-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703)-772-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.


Jill Warden
Supervisory Patent Examiner
Technology Center 1700

dkh

December 2, 2002